

Amendments to the Claims:

The following listing of the claims replaces all previous listings and versions of the claims in the application.

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Listing of the Claims:

1. (currently amended) Single step process for the preparation of lower α -alkene polymeri-
zation heterogeneous solid catalyst comprising an organomagnesium precursor derived pro-
catalyst comprising magnesium chloride supported titanium chloride and an internal electron
10 donor and an ~~organoaluminium~~ organoaluminum compound based cocatalyst, wherein the
mole ratio of ~~aluminium~~ aluminum in the cocatalyst to titanium in the procatalyst is 10 –
3000 : 1 and the procatalyst is obtained by single step reaction of the organomagnesium pre-
cursor and titanium tetrahalide or titanium haloalkoxo species of the formula $Ti(OR)_m X_n$,
15 wherein R is selected from the group consisting of methyl, ethyl, normal ~~[[or]]~~ propyl, iso-
propyl, normal ~~[[or]]~~ butyl, and isobutyl, ~~preferably n-butyl~~, X is selected from the group
consisting of chlorine ~~[[or]]~~ and bromine, ~~preferably chlorine~~ and $m + n = 4$ with the condi-
tion that when $m = 1$ ~~[[or]]~~ to 4, $n = 3$ ~~[[or]]~~ to 0 respectively with a hydrocarbon or halohydro-
carbon solvent and internal electron donor and optionally an acid halide under microwave ir-
20 radiation of 300 to 1200 W followed by isolating the procatalyst, the mole ratio of the or-
ganomagnesium precursor to the titanium tetrachloride or titanium haloalko species being 1 :
6 to 1 : 20 and the mole ratios of the electron donor and acid halide to titanium being 0.3 to
1.5 and 0.02 to 0.2, respectively.
- 25 2. (original) Single step process as claimed in claim 1, wherein the organomagnesium pre-
cursor is magnesium ethoxide.
3. (original) Single step process as claimed in claim 1, wherein the mole ratio of the or-
ganomagnesium precursor to the titanium tetrachloride or titanium haloalkoxo species is
30 1:13.

4. (original) Single step process as claimed in claim 1, wherein the titanium tetrahalide is titanium tetrachloride.

5 5. (currently amended) Single step process as claimed in claim 1, wherein the mole ratio of ~~aluminium~~ aluminum in the cocatalyst to titanium in the procatalyst is 200 : 1.

6. (original) Single step process as claimed in claim 1, wherein the solvent is chlorobenzene.

10 7. (original) Single step process as claimed in claim 1, wherein the microwave radiation of 300 W is applied.

8. (currently amended) Single step process as claimed in claim 1, wherein the ~~organoaluminum~~ aluminum compound is triethyl ~~aluminium~~ aluminum.

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9. (original) Single step process as claimed in claim 1, wherein the molar ratios of the electron donor and acid halide, if any, to titanium are 0.7 and 0.07 respectively.

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10. (currently amended) Single step process as claimed in claim 1, wherein the electron donor is selected from the group consisting of ethyl benzoate, dibutyl [[or]] and diisobutyl phthalate.

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11. (original) Single step process as claimed in claim 1, wherein the acid halide is benzoyl chloride.

12. (currently amended) Lower α -alkene polymerisation heterogeneous solid catalyst obtained by the single step process as claimed in ~~any one of claims 1 to 11~~ claim 1.

13. (currently amended) Single step process for the preparation of polypropylene ~~polymeri-~~
~~sation~~ polymerization heterogeneous solid catalyst comprising an organomagnesium precursor derived procatalyst comprising magnesium chloride supported titanium chloride and an internal electron donor and an ~~organoaluminium~~ aluminum compound based cocatalyst and a selectivity control agent, wherein the mole ratio of ~~aluminium~~ aluminum in the cocatalyst to titanium in the procatalyst is 10 – 3000 : 1 and the mole ratio of selectivity control agent to titanium is 10 – 100 : 1 and the procatalyst is obtained by single step reaction of organomagnesium precursor and titanium tetrahalide or titanium haloalkoxo species of the formula $Ti(OR)_m X_n$, wherein R is selected from the group consisting of methyl, ethyl, normal ~~[[or]]~~ propyl, isopropyl, normal ~~[[or]]~~ butyl, and isobutyl, ~~preferably n-butyl~~, X is selected from the group consisting of chlorine ~~[[or]]~~ and bromine, ~~preferably chlorine~~, $m = 0$ and $n = 4$ with a hydrocarbon or halohydrocarbon solvent and an internal electron donor and optionally an acid halide under microwave irradiation of 300 to 1200 W followed by isolating the procatalyst, the mole ratio of the organomagnesium precursor to the titanium tetrachloride or titanium haloalko species being 1 : 6 to 1 : 20 and the mole ratios of the electron donor and acid halide to titanium being 0.3 to 1.5 and 0.02 to 0.2 respectively.

14. (original) Single step process as claimed in claim 13, wherein the organomagnesium precursor is magnesium ethoxide.

15. (original) Single step process as claimed in claim 13, wherein the mole ratio of the organomagnesium precursor to the titanium tetrachloride or titanium haloalkoxo species is 1 : 13.

16. (original) Single step process as claimed in claim 13, wherein the titanium tetrahalide is titanium tetrachloride.

17. (currently amended) Single step process as claimed in claim 13, wherein the mole ratio of ~~aluminium~~ aluminum in the cocatalyst to titanium in the procatalyst is 200 : 1.

5 18. (original) Single step process as claimed in claim 13, wherein the solvent is chlorobenzene.

19. (original) Single step process as claimed in claim 13, wherein the microwave radiation of 300 W is applied.

10 20. (currently amended) Single step process as claimed in claim 13, wherein the ~~organoaluminium~~ organoaluminum compound is triethyl ~~aluminium~~ aluminum.

15 21. (currently amended) Single step process as claimed in claim 13, wherein the selectivity control agent is selected from the group consisting of p-ethoxy ethyl benzoate, [[or]] dicyclohexyl dimethoxy silane [[or]] and diphenyl dimethoxy silane.

22. (original) Single step process as claimed in claim 13, wherein the mole ratio of the selectivity control agent to titanium is 10 –75 : 1.

20 23. (original) Single step process as claimed in claim 13, wherein the molar ratios of electron donor and acid halide, if any to titanium are 0.7 and 0.07, respectively.

25 24. (currently amended) Single step process as claimed in claim 13, wherein the electron donor is selected from the group consisting of ethyl benzoate, dibutyl [[or]] phthalate, and diisobutyl phthalate.

25. (original) Single step process as claimed in claim 13, wherein the acid halide is benzoyl chloride.

26. (currently amended) ~~Lower α -alkene polymerisation~~ Polypropylene polymerization heterogeneous solid catalyst obtained by the single step process as claimed in ~~anyone of claims 13 to 25~~ claim 13.

27. (canceled)